The hæmoglobin varied from 15 to 74 per cent. (Fleischl), and the red corpuscles from 156,000 to 4,000,000. The color index in 53 of 66 observations was above normal. The lowest was 0.66, the highest 8.9 (?). Four cases showed the color index either constantly or usually low. In eight cases the low color index occurred at some time during the disease. The fall in the color index during rapid improvement took place in five of six cases, the corpuscular richness often becoming less than normal. The hæmoglobin in the course of time caught up with the reds. (See charts.) When improvement was gradual the increase in both elements was *pari passu*. The specific gravity bore a more constant relation to the number of red corpuscles than the hæmoglobin. During rapid improvement it was noticed that there was a tendency of the hæmoglobin to lag behind the other solids of the blood in their upward course. (See charts.)

The leucocytes on the average were below normal. They generally corresponded to the degree of anæmia, increasing during improvement and decreasing during decline. They increased in two cases just before death, a terminal leucocytosis.

A differential count (see Chart VI.) of stained specimens showed an average of 29½ per cent. of mononuclear cells, which is about normal. Very frequently there was a percentage increase of the small mononuclear cells. This would, at first glance, look like an absolute increase of the small mononuclears, and possibly account for the incorrect statements made by authors upon this point. The increase is only relative. It may be observed in these cases that the high percentage count of the lymphocytes was nearly always accompanied by a small number of leucocytes per cubic millimetre, thus bringing the absolute number of lymphocytes per cubic millimetre within the normal limits. What actually took place is a diminution in the number of polymorphonuclear neutrophiles, both relative and absolute.

The eosinophiles showed a disposition to increase with improvement and to diminish with the failing health, but this behavior was too fickle to enable one to formulate a rule concerning them.

The myelocytes were most abundant, broadly speaking, when the patient was low, but they appeared to be of little diagnostic or prognostic importance. These cases seem to show that the nucleated red cells are an essential feature of the disease. They were present in every case, although they often disappeared when the patient made a decided gain in health. The actual number was sometimes very large; in one case 10,336 per cubic millimetre, but more often it was small. The average number present in a cubic millimetre, with the exception of the case in which the number was so large, was 71. With this small number it often requires a prolonged search to discover them in the ordinary smear.

15. Cobbold. Discovery of the Adult Representative of Microscopic Filariæ. Lancet, 1877, ii. p. 70.

16. Thorpe. Fil. Sang. Hom. in the South Sea Islands. Brit. Med. Journ., 1896. p. 922.

17. Strube. Ueber das endemische Vorkommen von Parasiteneiern und Larven im Harn der Bewohner von Natal und Transvaal. Deutsch. med. Woch., 1897, No. 33, p. 522.

18. Guitéras. The Fil. Sang. Hom. in the United States. Chyluria. Med. News, 1886, xlviii. 399.

19. de Saussure. A Clinical History of Twenty-two Cases of Fil. Sang. Hom. Med. News, 1890, lvi. 704.

20. Mastin. The History of the Fil. Sang. Hom., its Discovery in the United States, and especially the Relationship of the Parasite to the Chylocele of the Tunica Vaginalis Testis. Annals of Surgery, 1888, viii. p. 321.

21. Slaughter. Two New Cases of Fil. Sang. Hom. Med. News, 1891, ii. 649.

22. Dunn. A Case of Fil. Sang. Hom. Trans. of the College of Phys. of Phila., 1898, p. 80.

23. Cobbold. On Filaria Bancrofti. Lancet, 1877, ii. 495.

24. Lewis. Fil. Sang. Hom. (Mature Form) Found in a Blood-clot in Nævoid Elephantiasis of the Scrotum. Lancet, 1877, ii. 453.

25. dos Santos. Filaria Bancrofti. Verificaçao no Brazil da descoberta de Bancroft, na Australia. O Progresso Medico, 1877, ii. 95.

26. Sibthorpe. On the Adult Male Fil. Sang. Hom. Brit. Med. Journ., 1889, i. 1344.

27. Maitland and Manson. A Case of "Filarial Disease" of the Lymphatics in which a Number of Adult Filariæ were Removed from the Arm. Brit. Med. Journ., 1894, i. 844.

28. Huber. Animal Parasites. Twentieth Century Practice of Medicine, 1896, viii. 605.

29. Young. Filariasis; Lymph Scrotum and Varicose Groin Glands, Brit. Med. Journ., 1897, i. 1037.

30. Magalhaes. Filarias encontradas no coraçao humano. Rio de Janeiro, 1886. Abstracted by v. Linstow, Cent. f. Bakt., 1892, xii. 88; vide also London Med. Rec., 1887, xv. 273.

31. Bourne. A Note on Fil. Sang. Hom., with Description of a Male Specimen. Brit. Med. Journ., 1888, i. 1050.

32. Soboroff. Untersuchungen über die Bau normaler und ectatischer Venen. Virchow's Archiv, 1872, liv. 306.

33. Janni. Die feinen Veränderungen der Venenhäute bei Varicen. Arch. f. klin. Chir., 1900, lxi. 12.

34. Marie. Adenolymphocèle inguino-crurale d'origine filarienne; examen histologique. Bull. de mém. Soc. de chir. de Par., 1898, xxiv. 807.

35. Manson. On the Production of Artificial Ecdysis in the Fil. Sang. Hom. Noct., etc. Brit. Med. Journ., 1893, i. 792.

36. Henry. Report of a Case of Indigenous Parasitic Chyluria, with Filaria Nocturna in the Blood. Med. News, 1896, lxviii. 477.

37. Manson. The Fil. Sang. Hom. and Fil. Diunna. International Clinics, April, 1895, p. 66.

38. Plehn. Die Kamerun-Küste. Berlin, 1898, 300.

39. Flint. A Case of Fil. Sang. Hom. with Chyluria Treated Successfully with Methylene-blue. New York Med. Journ., 1895, lxi. 737.

40. Laveran. Sur un cas de filariose. Bull. et Mémoires de la Soc. Méd. des hôpitaux de Paris, 1893, x. 738.

41. Lazarus. Die Anæmie. II Abtheil., Vienna, 1900, p. 63.

42. Lancereaux. Un cas de filaire hématique chez l'homme. Gaz. des hôpitaux, 1888, lxi. 630.

RECURRENT VOMITING IN CHILDREN. (CYCLIC VOMITING.)[1]

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THE following case-histories illustrate a condition which seems well worthy of a more extended consideration than has been devoted to it hitherto. The first case is an instance of the disease in a mild form and,

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